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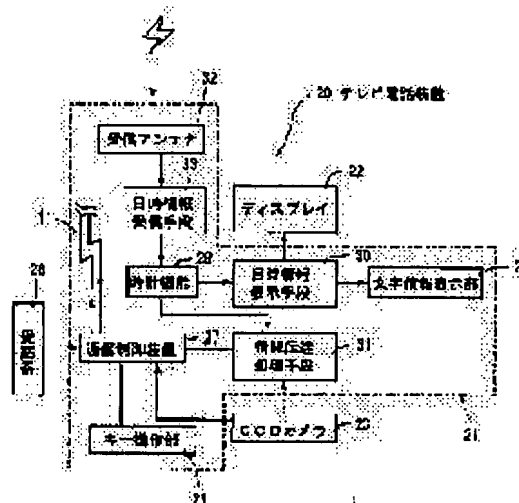
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(54) DEVICE AND SYSTEM FOR INFORMATION COMMUNICATION

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a device and a system for information communications including a video telephone set and a video telephone system by which its own date information can be seen easily on an opposite side.

SOLUTION: An information communication device 20 provided with an image pickup means 23 for picking up image information, an image display means 22 for displaying received image information on the opposite side, a voice information input/output means 26 for inputting and outputting voice information and a communication control means 27 capable of transmitting image information, voice information and character information is provided with an information transmission processing means 31 which gives various types of processing to its own date information and then sends its own date information in a state that the information can be displayed to the means 22 on the opposite side.



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CLAIMS

[Claim(s)]

[Claim 1] An image pick-up means to picturize image information, and an image display means to display the image information of the received other party, In the information communication device possessing a speech information I/O means to output and input speech information, and a communications control means by which image information and ***** can be transmitted The information communication device characterized by establishing the information-transmission processing means which makes the condition which can display the time information of self on the other party's image display means, and is sent into the above-mentioned communications control means after performing each processing to the time information on self.

[Claim 2] Said information-transmission processing means is an information communication device according to claim 1 characterized by transmitting time information as image information to the other party.

[Claim 3] It is the information communication device according to claim 1 characterized by said communications control means enabling transmission also of text by said information-transmission processing means transmitting time information as text to the other party. Text

[Claim 4] Said information communication device is an information communication device given in any 1 term of claims 1-3 characterized by having the time information-display means for displaying the time information on self on said image display means of self.

[Claim 5] An image pick-up means to picturize image information, and an image display means to display the image information of the received other party, In the information communication device possessing a speech information I/O means to output and input speech information, and a communications control means by which image information and speech information can be transmitted The clock function which counts the time information of self, and a time difference information storage means by which the time difference of the other party's address to a self address is memorized based on the telephone number, To the time information on self counted among a telephone number recognition means to recognize the other party's telephone number, by the above-mentioned clock function The information communication device characterized by providing a time count means to calculate the other party's time information by adjusting the time difference information acquired based on the other party's telephone number and the above-mentioned time difference information storage means which have been recognized by the above-mentioned telephone number recognition means.

[Claim 6] An image pick-up means to picturize image information, and an image display means to display the image information of the received other party, In the information communication device possessing a speech information I/O means to output and input speech information, and a communications control means by which image information and speech information can be transmitted A time information receiving means to read time information among the information included in the broadcast signal which connected with a receiving means to receive an external broadcast signal, and the above-mentioned receiving means, and was received with this receiving means, The information communication device characterized by providing an information-transmission processing means to

transmit by changing into the condition which can be displayed on the other party's image display means the time information read by the above-mentioned time information receiving means.

[Claim 7] The time information of self read by said time information receiving means is an information communication device according to claim 6 characterized by what is displayed by the time information-display means of self.

[Claim 8] The information communication device according to claim 6 or 7 characterized by establishing an amendment means to amend the error of the time information which this clock function has counted based on the time information read by said time information receiving means while the clock function which counts the time information on self is prepared.

[Claim 9] An information communication device given in any 1 term of claims 1-8 characterized by to be established an evasion means avoid the lap of time information and a face field when presenting of the time information transmitted to the face field extracted by this face field extract means by the other party has lapped, while a face field extract means extract the other party's face field among the images displayed on said image-display means of self is established.

[Claim 10] Said information communication device is an information communication device given in any 1 term of claims 1-9 characterized by being TV phone equipment.

[Claim 11] Said information communication device is an information communication device given in any 1 term of claims 1-9 characterized by being a personal computer.

[Claim 12] Said information communication device is an information communication device given in any 1 term of claims 1-9 characterized by being a cellular-phone terminal.

[Claim 13] The telecommunications system characterized by connecting between these by the communication line while equipping any 1 term of claims 1-12 with the information communication device of a publication at least one pair.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to an information communication device and telecommunications systems including the TV phone equipment which can aim at communication with a partner by voice and the image mutually among speakers.

[0002]

[Description of the Prior Art] In recent years, the TV phone system is used as a kind of an telecommunications system. This transmits not only voice data but dynamic-image data, such as a speaker, mutually by 1 to 1 among the speakers of a remote place. This TV phone system has been implementation-ized with maintenance of a high-speed-data communication network.

[0003] Moreover, the video conference system is used, for example in a company, and this is not connection of an one one-person pair mold like a TV phone system, and it also enables exchange of a dynamic image with information interchange with voice at each other, enabling two or more persons' participation. That is, transmission of voice data and dynamic-image data is performed among two or more numbers. This video conference system is also a kind of a TV phone system fundamentally.

[0004] In addition, although implementation of these TV phone systems with TV phone equipment is usually enabled, they attach peripheral devices including an image pick-up means in the personal computer possessing means of communications, and you may make it constitute TV phone equipment through network networks, such as the Internet. Although the configuration on independent TV phone equipment and a function does not change at all when such various peripheral devices are attached in a personal computer, the TV phone equipment with which a tariff becomes relatively cheap consists of minding a network network.

[0005] Furthermore, also in a cellular-phone terminal, it is going to realize the cellular-phone system with a TV phone function, for example by researches and developments of a W-CDMA method etc. In such a cellular-phone terminal, it is not different from the TV phone equipment which became independent functionally at all.

[0006] Here, it is explained below about the above information communication link structure of a system, using TV phone equipment as an example. In the TV phone system, it consists of communication lines, such as ISDN which connects these terminals to the terminal of TV phone equipment. Among those, TV phone equipment has a camera as an image pick-up means, and has the means of communications for transmitting the picturized image to the other party. This means of communications corresponds to the usual telephone function, and is equipped with the function to transmit one's data or to receive data from the other party to the specified partner.

[0007] Moreover, it has the display for displaying the image data transmitted by the other party.

Furthermore, it has the earphone, and it is constituted so that the input of voice data and an output may be performed from this earphone.

[0008] Moreover, a TV-with-Internet-functions telephone also exists in TV phone equipment. This makes communication link connection with personal computers or the common TV phone equipment

connected with the personal computer at the Internet, and the common TV phone equipments which were further connected to the Internet, using the Internet which has generally spread. In this Internet, voice data and dynamic-image data are transmitted and received using the communication control procedure called TCP/IP.

[0009]

[Problem(s) to be Solved by the Invention] By the way, in an above-mentioned TV phone system, image data, such as a speaker picturized with the image pick-up camera, etc. are distributed so that it can only peruse at the other party's television terminal. For this reason, it is in the condition that time information, such as time amount and a date, is not displayed on the image distributed to the other party.

[0010] For this reason, when talking over the telephone through a TV phone between those who are staying, for example at a foreign country, and those who are staying at their own country, the inconvenience of talking while checking the time amount of a spot one by one to each other may arise. In order that only an indoor situation may copy this out mutually in TV phone equipment, it is usually because [not clarifying in a thing] is night about whether the other party is daytime. In talking over the telephone among the countries which have two or more time zones in the same inside like [U.S.] especially, the speaker who talked over the telephone from Japan checks local time to the speaker in the United States in many cases. Thus, when using a TV phone, the inconvenience of checking time amount one by one among speakers at every message is covered.

[0011] Moreover, when those who are needed for the speaker of two or more different countries, such as the United States and Europe, and Japan in a TV phone system like a video conference system to which three or more grounds are connected, for example talk over the telephone to coincidence, what has much more desirable checking time amount does not become on smooth management of a meeting. furthermore, the time amount which the meeting took in the case of the television conference -- or it becomes forgetting a check although it is required to check the time amount which traffic etc. took. Moreover, the inconvenience that it must check by a clock etc. one by one is produced to check.

[0012] This invention was made based on the above-mentioned situation, and the place made into the purpose tends to offer an information communication device and telecommunications systems including the TV phone equipment which can see the time information of self easily in the other party, and a TV phone system.

[0013]

[Means for Solving the Problem] An image pick-up means by which this invention picturizes image information in order to attain the above-mentioned purpose, In the information communication device possessing an image display means to display the image information of the received other party, a speech information I/O means to output and input speech information, and a communications control means by which image information and ***** can be transmitted Suppose that the information-transmission processing means which makes the condition which can display the time information of self on the other party's image display means, and is sent into a communications control means is established after performing each processing to the time information on self.

[0014] For this reason, it becomes possible to tell about as a condition which can display the time information of self on the other party's image display means. By it, even when talking with the message person of a time zone different, for example, it becomes possible to tell about as a condition which can always display the time information of self on the other party's image display means, it is lost that the other party asks time information one by one, and convenience improves. For this reason, it becomes possible to talk over the telephone in consideration of the other party's convenience.

[0015] Moreover, as for an information-transmission processing means, in addition to above-mentioned invention, other invention transmits time information as image information to the other party further.

For this reason, time information will be in the condition of being displayed as a part of image information at the other party's image display means.

[0016] Furthermore, in addition to above-mentioned invention, other invention supposes that transmission of text is still more possible for a communications control means, and suppose an information-transmission processing means that time information is transmitted as text to the other

party. For this reason, time information will be in the condition of being displayed as text at the other party's image display means. Moreover, since it is transmitted as text, the amount of transmit information can be made very small. *display for*

[0017] Moreover, in addition to each above-mentioned invention, other invention presupposes an information communication device further that it has a time information-display means for displaying the time information on self on said image display means of self. For this reason, it becomes possible it not only to make it the time information here known, but to transmit time information to the other party and to display the time information on self on an image display means. *transmit for*

speed [0018] Furthermore, an image pick-up means by which other invention picturizes image information and an image display means to display the image information of the other party by whom it was received, In the information communication device possessing a speech information I/O means to output and input speech information, and a communications control means by which image information and speech information can be transmitted The clock function which counts the time information of self, and a time difference information storage means by which the time difference of the other party's address to a self address is memorized based on the telephone number, To the time information on self counted among a telephone number recognition means to recognize the other party's telephone number, by the clock function Suppose that a time count means to calculate the other party's time information by adjusting the time difference information acquired based on the other party's telephone number and time difference information storage means which have been recognized by the above-mentioned **** recognition means is provided.

[0019] For this reason, if the other party's telephone number is applied, based on this telephone number, it will become possible to calculate automatically the time difference of the other party's address to a self address with a time count means. That is, even if the other party's information communication device is not the configuration of transmitting time information, it becomes possible to get to know the other party's time information easily.

[0020] Moreover, an image pick-up means by which other invention picturizes image information and an image display means to display the image information of the other party by whom it was received, In the information communication device possessing a speech information I/O means to output and input speech information, and a communications control means by which image information and speech information can be transmitted A time information receiving means to read time information among the information included in the broadcast signal which connected with a receiving means to receive an external broadcast signal, and the receiving means, and was received with this receiving means, Suppose that an information-transmission processing means to transmit by changing into the condition which can be displayed on the other party's image display means the time information read by the time information receiving means is provided.

[0021] For this reason, it becomes ability ready for receiving about the exact time information included in the external broadcast signal by existence of a time information receiving means. It enables it to transmit always exact time information to the other party. *time*

[0022] Furthermore, suppose that the time information on self that other invention was further read by the time information receiving means in addition to above-mentioned invention is displayed by the time information-display means of self. For this reason, the time information on self read by the time information receiving means will be in the condition which can be displayed also on self with a time information-display means.

[0023] Moreover, other invention decides that an amendment means to amend the error of the time information which this clock function has counted based on the time information read by the time information receiving means is established while the clock function which counts the time information further on self in addition to each above-mentioned invention is prepared.

[0024] For this reason, the time information which the clock function of self has counted will be amended by the amendment means at any time, and comes to count time amount with an exact clock function by it.

[0025] Furthermore, while a face field extract means to extract the other party's face field among the

images which are displayed on the image display means of further self in addition to each above-mentioned invention is established, other invention When presenting of the time information transmitted to the face field extracted by this face field extract means by the other party has lapped, suppose that an evasion means to avoid the lap of time information and a face field is established.

[0026] For this reason, it can prevent that presenting of time information laps with the other party's face field, and it becomes possible to consider as the condition of having always displayed the other party's face. Especially, in the information communication device of a small screen, it becomes possible to grasp the expression of the other party's face much more good.

[0027] Moreover, in addition to each above-mentioned invention, other invention presupposes further that it is an information communication device TV phone equipment. For this reason, it becomes possible about time information to supply the TV phone equipment which can be displayed good.

[0028] Furthermore, in addition to each above-mentioned invention, other invention presupposes further that it is an information communication device a personal computer. For this reason, in the personal computer which can add other functions, time information can be made the configuration which adds the function of the TV phone which can be displayed good.

[0029] Moreover, in addition to each above-mentioned invention, other invention presupposes further that it is an information communication device a cellular-phone terminal. For this reason, in the cellular-phone terminal which can be carried, time information can be easily made the configuration which adds the function of the TV phone which can be displayed good.

[0030] Furthermore, other invention decides to connect between these by the communication line while being equipped with at least one pair of information communication device which is each above-mentioned invention. For this reason, it becomes possible to constitute the telecommunications system which can display time information good.

[0031]

[Embodiment of the Invention] (Gestalt of the first operation) The gestalt of operation of the first of this invention is hereafter explained based on drawing 1 and drawing 2. It is drawing showing the configuration of a TV phone system and TV phone equipment in drawing 1 among the telecommunications system of this invention, and an information communication device.

[0032] This TV phone system 10 has the communication lines 11, such as ISDN which connects the TV phone equipments 20 and these TV phone equipments 20 as a terminal. And these communication lines 11 are connected to the centralized-control base station 12. Two or more centralized-control base stations 12 are formed in the fixed communication line 11, and by the time they result in a different message person's TV phone equipment 20, generally they will go via two or more centralized-control base stations 12.

[0033] in addition, a communication line 11 is restricted to an ISDN circuit -- not having -- for example, other analog networks -- or you may be a CATV telecommunication cable. Moreover, these things may be combined.

[0034] TV phone equipment 20 consists of the telephone body section 21, a display 22 as an image display means connected with this telephone body section 21, and CCD camera 23 as an image pick-up means attached in this display 22 upper part. The key stroke section 24 for inputting the telephone number of the other party (it considers as the message person B hereafter.) who is in the United States is exposed and formed outside at the telephone body section 21. Moreover, the alphabetic character information-display section 25 for displaying text, such as a situation of equipment of operation, is also exposed and formed outside with the key stroke section 24. In addition, the alphabetic character information-display section 25 does not necessarily need to be formed, and is not cared about as a configuration on which a situation of operation is displayed on a display 22. 12

[0035] Moreover, the key stroke section 24 is adjoined and the earphone 26 which plays a role of a speech information I/O means is formed. Moreover, as shown in drawing 2, the communication controller 27 for performing transmission and reception of voice data or dynamic-image data among the message persons B, and recognizing the message person B is formed in the interior of the telephone body section 21.

[0036] In this TV phone equipment 20, the alphabetic character information-display section 25 which consists of a liquid crystal screen is formed in the telephone body section 21. This alphabetic character information-display section 25 is constituted so that the telephone number of the time information on self (it considers as the message person A hereafter.) which is for example, in Japan, or the other party, or duration of a call may be displayed. Therefore, in order to display time information on the alphabetic character information-display section 25, the clock function 28 is formed in the interior of the telephone body section 21, and it is constituted so that the time information which this clock function 28 has counted may be displayed on the alphabetic character information-display section 25.

[0037] Here, the clock function 28 is equipped with the receiving antenna 32 as a receiving means. This is for receiving broadcast of FM broadcasting, television broadcasting, etc. Moreover, this receiving antenna 32 is connected to the time information receiving means 33. The time information receiving means 33 is a part which carries out selection reception of the time information on which broadcast signals, such as these broadcasts, are overlapped. Here, time information is the teletext and PDC which are used in EDS or Europe. It is the present time information in the area of Format1 grade. Moreover, when time information is compressed data, it is also possible to decode time information in the information receive section 34.

[0038] That is, when the error has arisen between the time amount which the clock function 28 has counted when the present time information is received, an amendment means 35 to amend the error of the time amount of the clock function 28 is established. And it is transmitted to the other party with voice data and image data, or it is constituted so that the time information on the clock function 28 amended by the amendment means 35 may be incorporated and transmitted to the image picturized with CCD camera 23. 1 X

[0039] In addition, it does not matter as a configuration in which the time information received with the time information receiving means 33 is displayed on the alphabetic character information-display section 25 as it is, without considering as the configuration which forms the clock function 28 in this case.

[0040] Moreover, as mentioned above, a receiving antenna 32 receives external broadcast and the clock function 28 does not matter as a stand-alone condition, without considering as the configuration which receives the present time information on which these broadcast signals are overlapped. In this case, as a time, time information including some errors of the side here comes to be displayed on the other party's display 22. In addition, although the configuration when the clock function 28 has been independent of external broadcast in this way is constituted by the clock circuit usually used, for example, it is not cared about as a configuration which replaces with a clock circuit and realizes a clock function in software.

[0041] Furthermore, presenting of the time information in the message person A is not cared about as a configuration displayed on a display 22, without making it display on the above-mentioned alphabetic character information-display section 25. When making it display on a display 22, the time information which the clock function 28 counted is transmitted to the time information-display means 30. And it is constituted by this time information-display means 30 so that the time information which the clock function 28 counted may be displayed on the position on a display 22 with predetermined magnitude and a font as predetermined alphabetic data or designed image data.

[0042] Although the above explanation described the case where the message person's A time information was displayed on the TV phone equipment 20 of self, the following explanation describes the configuration which transmits the message person's A time information to the message person B. In addition, it does not matter as a configuration on which it is made to display on a display 22 that only the message person's B time information mentions later, without displaying the message person's A time information in any way.

[0043] The clock function 28 which consists in the telephone body section 21 is connected to the information-transmission processing means 31. This information-transmission processing means 31 changes into a predetermined data format the time information transmitted from the clock function 28, or performs each processing of compressing first. And it is made to incorporate so that this time information may synchronize with dynamic-image data after that, and sends into a communication

controller 27. That is, the information-transmission processing means 31 is connected to the communication controller 27 with CCD camera 23. Moreover, the communication controller 27 is connected also to the earphone 26.

[0044] In addition, you may make it the configuration which enables transmission also of the information by CCD camera 23 with a communication controller 27 through the information-transmission processing means 31.

[0045] For this reason, CCE 27 can be changed into the condition of having incorporated the time information emitted by voice data and not only dynamic-image data but this dynamic-image data from the clock function 28 to the other party's message person, and can be made to send to coincidence. And when it is made to display on a display 22 after the other party receives this, it will be in the condition that the time information on the side here is displayed with the display of dynamic-image data.

However, if it is not necessary to necessarily send as image data and is expressed as the other party's display 22 good, it will not matter even if it makes it the configuration which sends as alphabetic data.

[0046] Moreover, CCD camera 23 is not cared about as a configuration to which the clock function 28 is attached, without considering as the configuration which includes the time information which the clock function 28 prepared in the telephone body section 21 interior has counted in dynamic-image data. In this case, if the message person A is picturized as a dynamic image with CCD camera 23, time information will be included in dynamic-image data by coincidence with that image pick-up. And where time information is beforehand incorporated in CCD camera 23, it transmits to the message person B. If the message person B receives this dynamic-image data also in this case and it reproduces on a display 22, it will be in the condition that time information is also displayed with that playback.

[0047] Thus, there is an advantage at the point which becomes possible [telling the other party about the true time of day when the self image was picturized as an advantage in the case of making the time-of-day data emitted from the clock function 28 send to the other party's message person]. That is, for example among overseas message persons, by the time image data is exactly displayed on the other party's display 22, some time lag will arise. For this reason, it becomes possible to tell the other party about the true time of day when the configuration which also sends time-of-day data to voice data and image data, and coincidence then voice data, and image data were obtained correctly. (X)

[0048] Even when telephoning to a partner by displaying the time information on self on a display 22 using TV phone equipment 20 according to the TV phone equipment 20 of such a configuration, it becomes possible to get to know the time information on self [real time]. Moreover, by displaying the time information on self on the self display 22, it becomes possible to get to know duration of a call, and contributes also to mitigation of the costs which a message takes.

[0049] Moreover, it becomes possible by having established the information-transmission processing means 31 to transmit the message person's A time information on real time to the message person B.

This becomes possible in the message person B to get to know the message person's A time information on real time to the midst which is talking over the telephone. Thus, even when telephoning to the partner of a time zone different, for example with getting to know the time information of the other party who is talking over the telephone on real time having constituted possible, the inconvenience of asking a partner's time amount one by one is lost. Moreover, in consideration of the convenience of the other party's time amount, it becomes possible to talk over the telephone. For example, if it is at the time when a partner's time zone and the last train of an afternoon where time of day is late are near, a message will be cut a little early and consideration of being made to carry out sleeping of a partner and the obstacle of going home will be attained.

[0050] Furthermore, when the time information sent to the message person B is transmitted as image data, it becomes possible to display the message person's A time information as image data in the message person's B display 22. Moreover, transmission of the time information to the message person B can also be transmitted not as image data but as alphabetic data. Anyway, in the message person's B display 22, a check becomes possible good about the message person's A time information.

[0051] As mentioned above, although the gestalt of operation of the first of this invention was described, this invention is variously deformable besides this. In addition, below, the gestalt of the second

operation and the gestalt of the third operation are shown.

[0052] (Gestalt of the second operation) Although the gestalt of the first operation of a **** described the configuration which transmits the time information on self to the other party When time information is not transmitted at all by the message person B, it does not matter as a configuration possessing the time information automatic calculation means 40 constituted so that the message person's B time information might also be computed automatically and might be displayed on a display 22 in the message person's A TV phone equipment 20 as shown in drawing 3. The configuration in this case is equipped with a telephone number recognition means 41 to recognize the message person's B telephone number. By the key stroke of the key stroke section 24, the telephone number recognition means 41 in the gestalt of this second operation recognizes the message person's B telephone number, or is equipped with a function equivalent to the so-called number display function, and recognizes the message person's B telephone number.

[0053] The telephone number recognition means 41 is connected to the inquiry means 42. And this inquiry means 42 is further connected to the time difference information storage means 43. The inquiry means 42 asks time difference to the time difference information storage means 43 based on the country code of the degree, and area code except for the international number for identifying the telephone company among the telephone numbers recognized by the telephone number recognition means 41.

[0054] the time difference information storage means 43 -- every country exception and local exception -- the time difference from the operating area of the present TV phone equipment 20 -- which -- about -- it is -- or is memorized beforehand. For this reason, when a country code and the time difference based on area code are asked from the inquiry means 42, it is constituted so that the time difference information according to this inquiry may be asked and it may provide for a means 42.

[0055] The time difference information with which asked from the time difference information storage means 43, and the means 42 was provided is sent to the time count means 44. The time count means 44 calculates the message person's B time information by adjusting the time difference information which the inquiry means 42 has to the time information which the message person's A clock function 28 counts.

[0056] And the message person's B time information calculated by the time count means 44 is changed into the condition of being displayed on a display 22 by the time information-display means 30. After that, time information is displayed on a display 22. If the time information automatic calculation means 40 which the TV phone equipment 20 of self has is used when telephoning to what kind of the other party, if it is made such a configuration, it will become possible to acquire the other party's time information easily.

[0057] Moreover, although the gestalt of the first operation of a **** has described the TV phone equipment 20 and the TV phone system 10 supposing the area where allowed times differ, also when using a TV phone system, for example in Japan, it is possible to use this invention, of course. In this case, a configuration can be simplified and it can consider as the configuration on which the time information on the clock function which the TV phone equipment 20 of self has is displayed on a display 22 as it is.

[0058] Although the gestalt of the above first and the second operation explained the TV phone equipment 20 which cannot be used as other applications, you may make it use a personal computer as TV phone equipment unlike this. Although it differs from TV phone equipment in respect of a hard side or software when using a personal computer, it will become almost equivalent to TV phone equipment functionally. That is, TV phone equipment serves as a configuration realizable in software by including various programs in a personal computer in the function realized in hard.

[0059] Moreover, also when a cellular-phone terminal has a TV phone function, of course, it is possible to apply this invention. At a cellular-phone terminal, although the communication line 11 of a cable is not connected, about the other configuration, it becomes the TV phone equipment stated with the gestalt of above-mentioned operation, and the configuration same on a functional target.

[0060] In addition, of course, it is possible to apply this invention to other information communication devices (for example, a car-navigation system, Personal Digital Assistants other than a cellular phone, 800

etc.) besides these personal computers and a cellular-phone terminal.

[0061] (Gestalt of the third operation) The gestalt of operation of the third of this invention is hereafter explained based on drawing 4 and drawing 5. In addition, fundamentally, although the TV phone equipment 50 stated with the gestalt of this operation is the same configuration as the TV phone equipment 20 stated with the gestalt of the first mentioned above and the second operation, it adds the function of further others. Hereafter, it is described.

[0062] The TV phone equipment 50 of the gestalt of this operation is equipped with the face field extract means 51. This face field extract means 51 extracts automatically in which field the other party's other party's face part exists. Although it generally becomes the image with which a face field moves in TV phone equipment 50, other parts serve as a static image in many cases, and are performed by extracting the face field which is the part which moves by the comparison with a coma old [other], or extracting a face field by the comparison with a face pattern etc.

[0063] The evasion means 52 is connected to this face field extract means 51. The evasion means 52 avoids the face field extracted by the face field extract means 51, and it is constituted so that time information may be displayed on the other part. As shown in drawing 5 (B), when the time information-display section Y comes to the extracted face field part X, this detects it automatically by the software side, and it sets it up so that the time information-display section Y may not overlap the face field part X. That is, he moves the time information-display section Y, and is trying not to lap with the face field part X, as shown in drawing 5 (C). Thus, the evasion means 52 extracts time information, manages this time information, and is constituted by the field of arbitration possible [a display].

[0064] Thus, if constituted, it will become possible to recognize in the always good condition, without the time information-display section's Y not coming to the face field part X, and being interfered with the image of the other party's face for time information at all.

[0065] That is, for example by the case where a display 22 is small, although it is easy to produce especially the case where the message person's B expression cannot be checked by presenting of time information etc., it becomes possible to use to display time information on the face field part X automatically by the evasion means 52 in this way as much more good TV phone equipment by avoiding.

[0066] As mentioned above, although the gestalt of operation of the third of this invention was described, of course, it is possible to also apply invention stated with the gestalt of this operation to a personal computer, or a cellular-phone terminal or the other various information machines and equipment.

[0067]

[Effect of the Invention] According to this invention, it becomes possible to tell about as a condition which can display the time information of self on the other party's image display means. By it, even when talking with the message person of a time zone different, for example, it becomes possible to tell about as a condition which can always display the time information of self on the other party's image display means, it is lost that the other party asks time information one by one, and convenience improves. For this reason, it becomes possible to talk over the telephone in consideration of the other party's convenience depending on a time zone.

[Translation done.]

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TECHNICAL FIELD

[Field of the Invention] This invention relates to an information communication device and telecommunications systems including the TV phone equipment which can aim at communication with a partner by voice and the image mutually among speakers.

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PRIOR ART

[Description of the Prior Art] In recent years, the TV phone system is used as a kind of an telecommunications system. This transmits not only voice data but dynamic-image data, such as a speaker, mutually by 1 to 1 among the speakers of a remote place. This TV phone system has been implementation-ized with maintenance of a high-speed-data communication network.

[0003] Moreover, the video conference system is used, for example in a company, and this is not connection of an one one-person pair mold like a TV phone system, and it also enables exchange of a dynamic image with information interchange with voice at each other, enabling two or more persons' participation. That is, transmission of voice data and dynamic-image data is performed among two or more numbers. This video conference system is also a kind of a TV phone system fundamentally.

[0004] In addition, although implementation of these TV phone systems with TV phone equipment is usually enabled, they attach peripheral devices including an image pick-up means in the personal computer possessing means of communications, and you may make it constitute TV phone equipment through network networks, such as the Internet. Although the configuration on independent TV phone equipment and a function does not change at all when such various peripheral devices are attached in a personal computer, the TV phone equipment with which a tariff becomes relatively cheap consists of minding a network network.

[0005] Furthermore, also in a cellular-phone terminal, it is going to realize the cellular-phone system with a TV phone function, for example by researches and developments of a W-CDMA method etc. In such a cellular-phone terminal, it is not different from the TV phone equipment which became independent functionally at all.

[0006] Here, it is explained below about the above information communication link structure of a system, using TV phone equipment as an example. In the TV phone system, it consists of communication lines, such as ISDN which connects these terminals to the terminal of TV phone equipment. Among those, TV phone equipment has a camera as an image pick-up means, and has the means of communications for transmitting the picturized image to the other party. This means of communications corresponds to the usual telephone function, and is equipped with the function to transmit one's data or to receive data from the other party to the specified partner.

[0007] Moreover, it has the display for displaying the image data transmitted by the other party. Furthermore, it has the earphone, and it is constituted so that the input of voice data and an output may be performed from this earphone.

[0008] Moreover, a TV-with-Internet-functions telephone also exists in TV phone equipment. This makes communication link connection with personal computers or the common TV phone equipment connected with the personal computer at the Internet, and the common TV phone equipments which were further connected to the Internet, using the Internet which has generally spread. In this Internet, voice data and dynamic-image data are transmitted and received using the communication control procedure called TCP/IP.

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EFFECT OF THE INVENTION

[Effect of the Invention] According to this invention, it becomes possible to tell about as a condition which can display the time information of self on the other party's image display means. By it, even when talking with the message person of a time zone different, for example, it becomes possible to tell about as a condition which can always display the time information of self on the other party's image display means, it is lost that the other party asks time information one by one, and convenience improves. For this reason, it becomes possible to talk over the telephone in consideration of the other party's convenience depending on a time zone.

[Translation done.]

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TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] By the way, in an above-mentioned TV phone system, image data, such as a speaker picturized with the image pick-up camera, etc. are distributed so that it can only peruse at the other party's television terminal. For this reason, it is in the condition that time information, such as time amount and a date, is not displayed on the image distributed to the other party.

[0010] For this reason, when talking over the telephone through a TV phone between those who are staying, for example at a foreign country, and those who are staying at their own country, the inconvenience of talking while checking the time amount of a spot one by one to each other may arise. In order that only an indoor situation may copy this out mutually in TV phone equipment, it is usually because [not clarifying in a thing] is night about whether the other party is daytime. In talking over the telephone among the countries which have two or more time zones in the same inside like [U.S.] especially, the speaker who talked over the telephone from Japan checks local time to the speaker in the United States in many cases. Thus, when using a TV phone, the inconvenience of checking time amount one by one among speakers at every message is covered.

[0011] Moreover, when those who are needed for the speaker of two or more different countries, such as the United States and Europe, and Japan in a TV phone system like a video conference system to which three or more grounds are connected, for example talk over the telephone to coincidence, what has much more desirable checking time amount does not become on smooth management of a meeting. furthermore, the time amount which the meeting took in the case of the television conference -- or it becomes forgetting a check although it is required to check the time amount which traffic etc. took. Moreover, the inconvenience that it must check by a clock etc. one by one is produced to check.

[0012] This invention was made based on the above-mentioned situation, and the place made into the purpose tends to offer an information communication device and telecommunications systems including the TV phone equipment which can see the time information of self easily in the other party, and a TV phone system.

[Translation done.]

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the schematic diagram showing the configuration of the TV phone system concerning the gestalt of operation of the first of this invention, and TV phone equipment.

[Drawing 2] It is the system chart showing the internal configuration of the TV phone equipment shown in drawing 1.

[Drawing 3] It is the system chart showing the internal configuration of the TV phone equipment concerning the modification of the gestalt of operation of the first of this invention.

[Drawing 4] It is the system chart showing the internal configuration of the TV phone equipment concerning the gestalt of operation of the second of this invention.

[Drawing 5] In the TV phone equipment shown in drawing 4, when the time information-display section Y comes to the face field part X, it is drawing showing signs that an evasion means operates and the time information-display section Y is moved.

[Description of Notations]

- 10 -- TV phone system (telecommunications system)
- 11 -- Communication line
- 20 50 -- TV phone equipment (information communication device)
- 21 -- Telephone body section
- 22 -- Display
- 23 -- CCD camera
- 25 -- Alphabetic character information-display section
- 26 -- Earphone (speech information I/O means)
- 27 -- Communication controller
- 28 -- Clock function
- 30 -- Time information-display means
- 31 -- Information-transmission processing means
- 32 -- Receiving antenna (receiving means)
- 33 -- Time information receiving means
- 40 -- Time information automatic calculation means
- 41 -- Telephone number recognition means
- 42 -- Inquiry means
- 43 -- Time difference information storage means
- 44 -- Time count means
- 51 -- Face field extract means
- 52 -- Evasion means

[Translation done.]

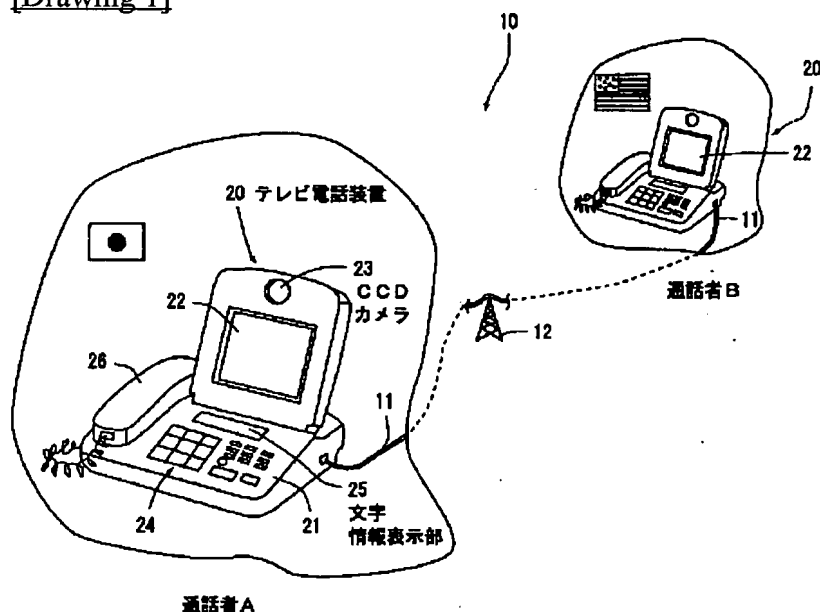
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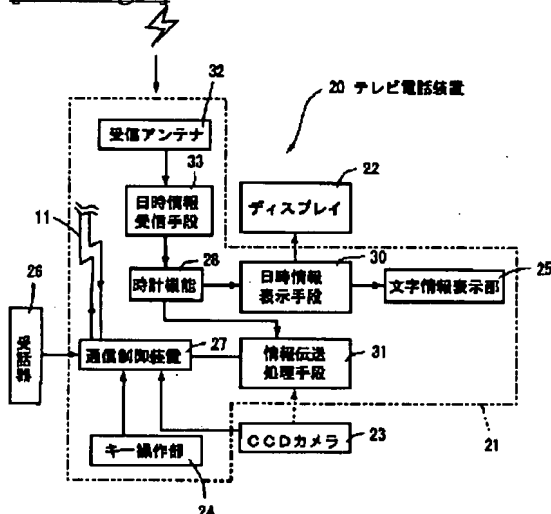
DRAWINGS

[Drawing 1]



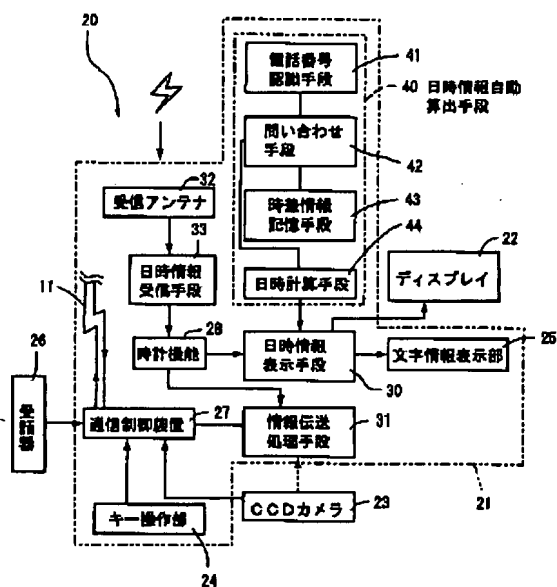
10: TV phone system
 12: Base station
 22: display
 23: camera
 25: Alphabetical
 character information
 display part
 26: camera

[Drawing 2]

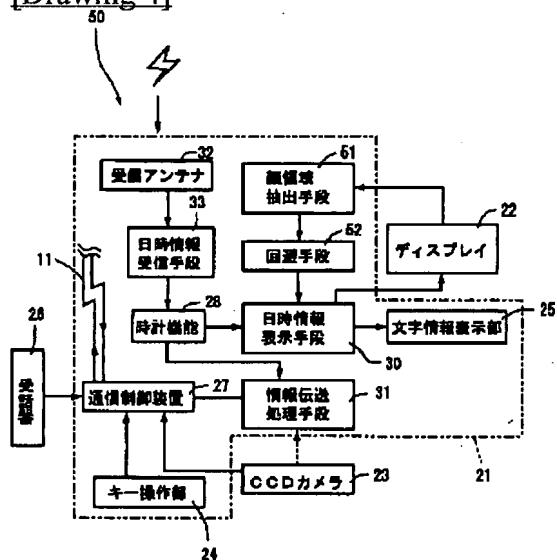


27: Communication
 control
 28: Clock information

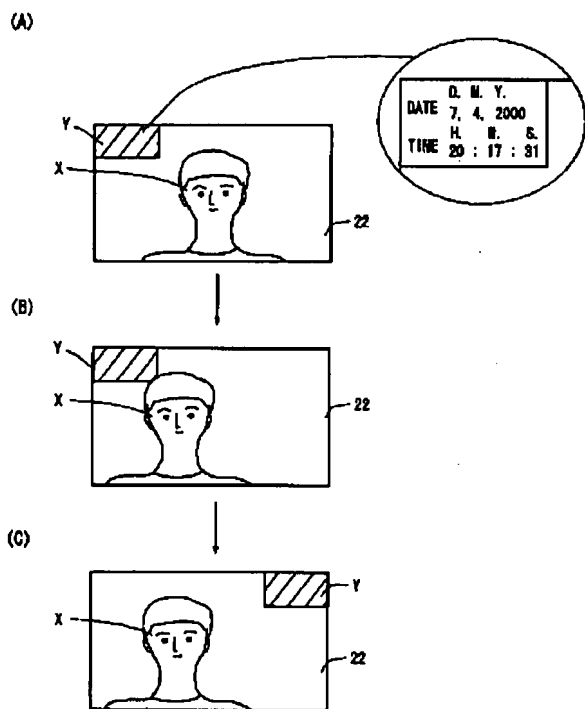
[Drawing 3]



[Drawing 4]



[Drawing 5]



[Translation done.]